IN THE CLAIMS:

Please amend claims 1-3, 6-9, 12-15, 23 and 24 as indicated in the following.

Please add claim 25 as indicated in the following.

Claims Listing:

1. (Currently Amended) A method comprising ~~the steps of~~:
   accessing a first index table;
   accessing a first plurality of macroblock information in a first order at a video decoder to generate a first decoded image, wherein the first order is based upon the first index table and the first plurality of macroblock information [[are]]is associated with a source macroblock;
   ~~accessing~~ processing the first plurality of macroblock information to generate a first estimated destination motion vector; and
   wherein the macroblock information includes motion vector and quantization information.

2. (Currently Amended) The method of claim 1, further comprising ~~the step of~~:
   generating an encoded a destination video image based upon the first decoded image and the estimated destination macroblock information.

3. (Currently Amended) The method of claim 1, wherein the first index table includes a plurality of entries, each one of the plurality of entries comprising a pointer portion to hold a value indicating a location of a source macroblock information with an end of destination macroblock portion to hold a value indicating [[if]]whether an entry of the plurality of entries is the last entry associated with the first destination macroblock information.

4. (Original) The method of claim 1, wherein each entry of the plurality of entries has a predetermined size.

5. (Original) The method of claim 4, wherein the predetermined size of each entry is the same.

6. (Currently Amended) The method of claim 1, wherein each entry of the plurality of entries ~~are arranged relative to each other entry~~is arranged relative to the other entries of the plurality of entries to indicate the first order.

7. (Currently Amended) The method of claim 1 further comprising ~~the step of~~:
   generating a first estimated macroblock information for a first destination macroblock, wherein the first destination macroblock information is based upon at least a portion of the first plurality of macroblock information and the first destination macro block is downscaled relative to the source macro block.

8. (Currently Amended) The method of claim 5, wherein the first index table includes a plurality of entries, each one of the plurality of entries comprising a pointer portion to hold a value indicating a location of a source macroblock ~~informationand~~information and an end of destination macroblock portion to hold a value indicating if an entry of the plurality of entries is the last entry associated with the first destination macroblock information.

9. (Currently Amended) The method of claim 8, wherein each entry of the plurality of entries ~~are arranged relative to each other entry~~is arranged relative to the other entries of the plurality of entries to indicate the first order.

10. (Original) The method of claim 9, wherein each entry of the plurality of entries has a predetermined size.

11. (Original) The method of claim 10, wherein the predetermined size of each entry is the same.

12. (Currently Amended) The method of claim 7 further comprising ~~the steps of~~:
accessing a second index table;
accessing the first plurality of source macroblock information in a second order at the video decoder to generate a second decoded image, wherein the second order is based upon the second index table and the first plurality of source macroblock information are associated with a source macroblock; and
accessing the second plurality of source macroblock information to generate a second estimated destination macroblock information.

13. (Currently Amended) The method of claim 10 further comprising ~~the steps of~~:
generating a first macroblock based upon the first estimated destination vector, and a second macroblock based upon the second estimated destination vector, the first and second macroblocks are to be displayed simultaneously in real time.

14. (Currently Amended) A method comprising ~~the steps of~~:
storing video source macroblock information for each source macroblock of a first plurality of source macroblocks;
determining an index table having a plurality of entries, the index table based upon a video source resolution and a video destination resolution, wherein a location of each source macroblock information for each macroblock is referenced by a corresponding entry of the index table; and

storing the index table.

15. (Currently Amended) The method of claim 14 further comprising ~~the step of~~:
determining a data instruction packet to be processed by a portion of a video transcoder, wherein the data instruction packet identifies a location of the index table.

16. (Original) The method of claim 14, wherein the portion of the video transcoder is a video decoder portion.

17. (Original) The method of claim 14, wherein the portion of the video transcoder is a video encoder portion.

18. (Original) The method of claim 14, wherein the portion of the video transcoder is a video encoder portion and a video decoder portion.

19. (Original) The method of claim 14 wherein each entry of the index table has a common size.

20. (Original) The method of claim 14, wherein the index table includes an end of macroblock indicator to indicate a portion of the index table associated with a destination macroblock.

21. (Original) The method of claim 20, wherein the end of macroblock indicator is stored as a value within a field of an index table entry.

22. (Original) A system comprising:

a first input port to receive source video data;

a controller portion coupled to the first input port to determine macroblock information data corresponding to the received source video data, wherein the macroblock information includes motion vector and quantization information;

a first memory control portion coupled to the controller portion to save a plurality of source macroblock information corresponding to the source video data; and

an index table generator coupled to receive a size indicator of a destination image and to generate an index table identifying a first portion of the plurality of source macroblock information to be used to generate a first destination source vector, the index table based upon the size indicator of the destination image.

23. (Currently Amended) The system of ~~claim 21~~claim 22 further comprising:

a second memory control portion coupled to retrieve source macroblock information based upon index table entries; and

an encoder portion coupled to the second memory control portion to generate destination vectors based upon the retrieved source macroblock information.

24. (Currently Amended) The system of ~~claim 21~~claim 22, wherein the index table generator is implemented using a general purpose processor core.

25. (New) A method comprising:

accessing a first index table;

accessing a first plurality of macroblock information in a first order at a video decoder to generate a first decoded image, wherein the first order is based upon the first index table and the first plurality of macroblock information is associated with a source macroblock;

processing the first plurality of macroblock information to generate a first estimated destination motion vector;

accessing a second index table;

accessing a second plurality of macroblock information in a second order at the video decoder to generate a second decoded image, wherein the second order is based upon the second index table and the second plurality of macroblock information is associated with a source macroblock;

processing the second plurality of macroblock information to generate a second estimated destination macroblock information; and

generating a first macroblock based on the first estimated destination vector and a second macroblock based on the second estimated destination vector, wherein the first and second macroblocks are to be displayed simultaneously in real time.